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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,519	08/29/2001	William R. Wheeler	10559-605001 / P12889	6850
20985	7590	06/16/2005	EXAMINER	
FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081			THOMPSON, ANNETTE M	
			ART UNIT	PAPER NUMBER
			2825	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

09/941,519

Applicant(s)

WHEELER ET AL.

Examiner

A. M. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,16,17,38-40 and 42-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44-49 is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 38-40 is/are rejected.
- 7) ☒ Claim(s) 16,17,42 and 43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09/22/2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection on 12/08/2004. Applicant's submission filed on 12/08/2004 was entered and considered. New grounds of rejection based on Applicants' amendment were entered in the action of 03/11/2005. However, the action should have been a Non-Final action. Accordingly, the finality of the last Office action of 03/11/2005 is hereby withdrawn, sua sponte, and the Amendment in Reply to Action of March 11, 2005 has been entered.

2. Applicants' Amendment has been considered and remarks reviewed. Claims 1, 38, 42, and 44 are amended. Claims 15 and 41 are cancelled. Claims 1, 3, 4, 16, 17, 38-40, and 42-49 are pending.

Drawings

3. The drawings are objected to because the drawing orientation of Figure 3 is inconsistent with that of Figure 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary

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to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Rejection of claims 1, 3, 4, and 38-40

1. **Claims 1, 3, 4, and 38-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawman et al. (Lawman), U.S. Patent 5,673,198 in view of Applicants' admitted prior art and further in view of Watkins et al., U.S. Patent 5,220,512. Lawman discloses a concurrent electronic circuit design and implementation using a display system but fails to specifically disclose the elements of the group of integrated circuit components. Additionally, although Lawman discloses monitoring a design environment to detect design changes, Lawman fails to specifically disclose monitoring a design environment to detect the deletion of a circuitry component. Applicants' admitted prior art in the specification background (page 1, line 5-10) discloses the components of an integrated circuit. Because Lawman illustrates at least

a latch and 2 NAND gates in Figure 1, it would have been obvious to one of ordinary skill in the art at the time of Applicants' invention that Lawman at least suggests the inclusion of the integrated circuit components disclosed in Applicants' admitted prior art. Watkins discloses an electronic CAD system comprising, inter alia, a display screen and system. Watkins further details the design changes monitored by the electronic Cad display system (col. 5, ll. 35-44) as including creating, selecting, moving, modifying, and deleting objects on the display screen. It therefore would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to combine Lawman with Watkins for a more detailed understanding of the display design changes contemplated by Lawman since both Lawman and Watkins utilize Electronic CAD display systems as design tools.

2. Pursuant to claim 1, Lawman discloses a method of designing a semiconductor device (see Abstract), the method comprising: providing a plurality of component design parameter files in a data repository (Fig. 1, #20), each of the component design parameter files associated with a discrete circuitry component and including an estimated silicon area required to construct the discrete component (col. 2, ll. 27-35 references occupied area), the circuitry components including at least some components selected from the group consisting of an AND gate, an OR gate, a NAND gate, a NOR gate, an XOR gate, a latch, and a flip-flop; maintaining a circuit design parameter file (Applicants' admitted prior art in specification, page 1, lines 5-10; see also Lawman Figure 1 design window elements) for a circuit being designed (col. 2, ll. 19-29), the circuit design parameter file specifying an estimated total silicon area for the

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circuit being designed (col. 2, ll. 19-39); monitoring a design environment to detect an addition of a circuitry component to the circuit (col. 2, ll. 41-56; see also col. 6, ll. 5-55); accessing a component design parameter file associated with the determined type of circuitry component that specifies the estimated silicon area required to construct the added circuitry component; (col. 2, ll. 19-39); updating the circuit design parameter file wherein updating includes adding the specified estimated silicon area required to construct the added circuitry component to the estimated total silicon area maintained in the circuit design parameter file so that the estimated total silicon area includes the silicon area required to construct the added circuitry component; and (col. 6, ll. 5-25); providing the circuit designer with feedback concerning the estimated total silicon area required to construct the added circuitry component. (col. 6, ll. 5-25 and ll. 56-65); providing the circuit designer with feedback concerning the estimated total silicon area of the circuit being designed (col. 2, ll. 35-40; col. 2, ll. 49-56; col. 3, ll. 5-21; col. 3, ll. 24-32; col. 3, ll. 58-65; col. 9, ll. 15-29); and monitoring a design environment to detect the deletion of a circuitry component from the circuit being designed (Watkins, col. 5, ll. 35-40; col. 6, ll. 33-40).

3. Pursuant to claim 3, further comprising allowing the circuit designer to request feedback concerning the estimated total silicon area of the circuit being designed (col. 6, ll. 50-55).

4. Pursuant to claim 4 wherein the designer is provided with feedback concerning the estimated total silicon area of the circuit being designed in response to the circuit

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designer requesting feedback (col. 2, ll. 35-40; col. 2, ll. 49-56; col. 3, ll. 5-21; col. 3, ll. 24-32; col. 3, ll. 58-65; col. 9, ll. 15-29).

5. Pursuant to claims 38, 39 and 40, it comprises the limitations of claim 1, 3 and 4, respectively, but recites number of gates instead of estimated silicon area. Lawman discloses this limitation at column 9, lines 15-29, wherein it proposes an implementation process that "crosses a threshold in terms of number of gates" and further suggests that the expert system and design library would be applicable to an embodiment utilizing feedback with "number of gates".

Allowable Subject Matter

6. **Claims 16, 17, 42, 43** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. **Claims 44-49** are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter: Pursuant to **claims 16, 17, 42 and 43**, the prior art does not teach or suggest monitoring a design environment to detect the deletion of a circuitry component from the circuitry being designed in conjunction with providing the circuit designer with feedback concerning the total silicon area of a deleted circuitry component and updating the design parameter file considering the total silicon area for the deleted component. Pursuant to **claims 44-49**, in Applicants' method of designing a semiconductor device, the prior art does not teach or suggest providing feedback to a circuit designer regarding the number of transistors required to construct the circuit.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please reference the PTO-892 for a complete listing.

10. Any inquiry concerning this communication or earlier communications should be directed to Examiner A.M. Thompson whose telephone number is (571) 272-1909. The Examiner can usually be reached Monday thru Friday from 8:00 a.m. to 4:30 p.m..

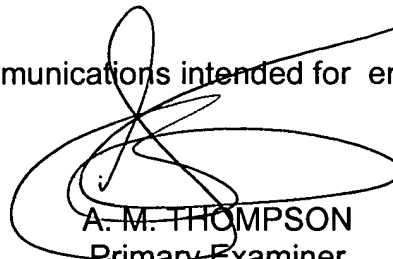
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11. Responses to this action should be mailed to the appropriate mail stop:

Mail Stop _____
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306, (for all **OFFICIAL** communications intended for entry)


A. M. THOMPSON
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